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Dated: September 17, 2004

Signature: Lynn L. Janulis

Docket No.: 28341/6216.NDV2
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Fisher *et al.*

Application No.: 10/657,399

Art Unit: Not Yet Assigned

Filed: September 8, 2003

Examiner: Not Yet Assigned

For: METHODS OF IDENTIFYING ANTI-VIRAL
AGENTS

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In compliance with 37 C.F.R. §1.97 and the duty of disclosure under 37 C.F.R. §1.56, the attached PTO-1449 form is submitted by Applicants for consideration in connection with the above-identified patent application. Copies of all references can be found in U.S. Patent Application Nos. 09/648,215, 09/382,616, and 09/728,466 (our docket nos. 28341/6216.NCP, 28341/6216, and 28341/6216.NDV1, respectively), to which the present application claims priority.

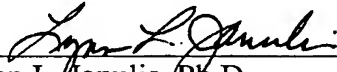
The present application is a divisional application of U.S. Patent Application No. 09/728,466, now issued U.S. Pat. No. 6,641,994, which is relied on for an earlier effective filing date under 35 U.S.C. §120. Thus, in accordance with 37 C.F.R. §1.98(d)(1), copies of the references cited on Form PTO-1449 are not attached herewith. However, should the Examiner require copies of one or more of the references cited in the prior application, the Applicants will furnish the documents upon request.

This information disclosure statement is not intended to be an admission that a search has been made, that other relevant art does not exist, or that any of the information disclosed herein constitutes prior art under 35 U.S.C. §102 or 35 U.S.C. §103.

This statement and Form PTO-1449 are being submitted before receipt of a first Office Action in the above-identified patent application. Accordingly, it is submitted that no fee is due in this matter under 37 C.F.R. §1.97(b). However, if it is determined that any appropriate fee is due, please charge Deposit Account Number 13-2855. A duplicate of this paper is enclosed.

Dated: September 17, 2004

Respectfully submitted,

By 
Lynn L. Janulis, Ph.D.

Registration No.: 53,066

Agent for Applicants

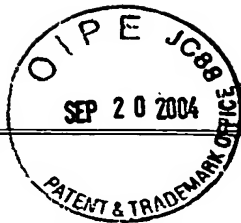
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SHEET 1 of 5

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U.S. PATENT DOCUMENTS

*Examiner Initials		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
	A1	5,283,173	02-01-94	Fields, <i>et al.</i>			
	A2	5,376,742	12-27-94	Krause			
	A3	5,457,189	10-10-95	Crooke, <i>et al.</i>			
	A4	5,547,846	08-20-96	Bartsch, <i>et al.</i>			
	A5	5,576,206	11-19-96	Schlegel			
	A6	5,625,031	04-29-97	Webster, <i>et al.</i>			
	A7	5,629,161	05-13-97	Müller, <i>et al.</i>			
	A8	5,681,944	10-28-97	Crooke, <i>et al.</i>			
	A9	5,736,318	04-07-98	Münster, <i>et al.</i>			
	A10	5,811,232	09-22-98	Crooke, <i>et al.</i>			

FOREIGN PATENT DOCUMENTS

*Examiner Initials		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No
	B1	95/20652	08-03-95	WO				
	B2	98/13502	04-02-98	WO				
	B3	0 666 270 A2	08-09-95	EPO				

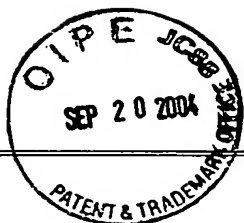
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	C1	Antinore, <i>et al.</i> , "The human papillomavirus type 16 E7 gene product interacts with and <i>trans</i> -activates the AP1 family of transcription factors," <i>EMBO. J.</i> , 15:1950-60 (1996)
	C2	Arroyo, <i>et al.</i> , "Association of the Human Papillomavirus Type 16 E7 Protein with the S-Phase-Specific E2F-Cyclin A Complex," <i>Mol. Cel. Biol.</i> 13:6537-6456 (1993)
	C3	Banks, <i>et al.</i> , "Ability of the HPV16 E7 protein to bind RB and induce DNA synthesis is not sufficient for efficient transforming activity in NIH3T3 cells," <i>Oncogene</i> 5:1383-1389 (1990)

EXAMINER

DATE CONSIDERED

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Fisher et al.

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C4	Cane, <i>et al.</i> , "Harnessing the Biosynthetic Code: Combinations, Permutations, and Mutations," <i>Science</i> 282:63-68 (1998)
C5	Chen, <i>et al.</i> , "Cyclin-Binding Motifs Are Essential for the Function of p21 ^{CIP1} ," <i>Mol. Cell. Biol.</i> 16:4673-82 (1996)
C6	Cheng, <i>et al.</i> , "Differentiation-dependent up-regulation of the human papillomavirus E7 gene reactivates cellular DNA replication in suprabasal differentiated keratinocytes," <i>Genes & Dev.</i> 9:2335-49 (1995)
C7	Chow, <i>et al.</i> , "Papillomavirus DNA Replication," <i>Intervirology</i> 37:150-8 (1994)
C8	Ciccolini, <i>et al.</i> , "Functional studies of E7 proteins from different HPV types," <i>Oncogene</i> 9:2633-8 (1994)
C9	Colas, <i>et al.</i> , "The impact of two-hybrid and related methods on biotechnology," <i>TIBTECH</i> 16:355-363 (1998)
C10	Connell-Crowley, <i>et al.</i> , "Phosphorylation Independent Activation of Human Cyclin-Dependent Kinase 2 by Cyclin A In Vitro," <i>Mol. Biol. Cell</i> 4:79-92 (1993)
C11	Davies, <i>et al.</i> , "Human Papillomavirus Type 16 E7 Associates with a Histone H1 Kinase and with p107 through Sequences Necessary for Transformation," <i>J. Virol.</i> , 67:2521-8 (1993)
C12	Draetta, <i>et al.</i> , "cdc2 Protein Kinase is Complexed with Both Cyclin A and B: Evidence for Proteolytic Inactivation of MPF," <i>Cell</i> 56:829-838 (1989)
C13	Dyson, <i>et al.</i> , "Homologous Sequences in Adenovirus E1A and Human Papillomavirus E7 Proteins Mediate Interaction with the Same Set of Cellular Proteins," <i>J. Virol.</i> 66:6893-6902 (1992)
C14	Dyson, <i>et al.</i> , "The Human Papilloma Virus-16 E7 Oncoprotein Is Able to Bind to the Retinoblastoma Gene Product," <i>Science</i> 243:934-7 (1989)
C15	Fields, <i>et al.</i> , "A novel genetic system to detect protein-protein interactions," <i>Nature</i> 340:245-246 (1989)
C16	Fields, "The Two-Hybrid System to Detect Protein-Protein Interactions," <i>Methods: A Companion to Methods in Enzymology</i> 5:116-124 (1993)
C17	Funk, <i>et al.</i> , "Inhibiting CDK inhibitors: new lessons from DNA tumor viruses," Elsevier Science Ltd. 337-341 (1998)
C18	Funk, <i>et al.</i> , "Inhibition of CDK activity and PCNA-dependent DNA replication by p21 is blocked by interaction with the HPV-16 E7 oncoprotein," <i>Genes & Dev.</i> 11:2090-100 (1997)
C19	Galloway, <i>et al.</i> , "The disruption of cell cycle checkpoints by papillomavirus oncoproteins contributes to anogenital neoplasia," <i>Semin. Cancer Biol.</i> 7:309-15 (1996)

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DATE CONSIDERED

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Applicant

Fisher et al.

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Not yet assigned

C20	Harper, <i>et al.</i> , "The p21 Cdk-Interacting Protein Cip1 Is a Potent Inhibitor of G1 Cyclin-Dependent Kinases," <i>Cell</i> 75:805-816 (1993)
C21	Houston, <i>et al.</i> , "The chemical-biological interface: developments in automated and miniaturised screening technology," <i>Curr. Opin. Biotechnol.</i> 8:734-740 (1997)
C22	Jayawickreme, <i>et al.</i> , "Gene expression systems in the development of high-throughput screens," <i>Curr. Opin. Biotechnol.</i> 8:629-634 (1997)
C23	Jones, <i>et al.</i> , "The human papillomavirus E7 oncoprotein can uncouple cellular differentiation and proliferation in human keratinocytes by abrogating p21Cip1-mediated inhibition of cdk2," <i>Genes & Dev.</i> 11:2101-11 (1997)
C24	Jones, <i>et al.</i> , "Interactions of the human papillomavirus E7 protein with cell cycle regulators," <i>Cancer Biology</i> 7:327-337 (1996)
C25	Koonin, "A common set of conserved motifs in a vast variety of putative nucleic acid-dependent ATPases including MCM proteins involved in the initiation of eukaryotic DNA replication," <i>Nucl. Acids Res.</i> 21:2541-7 (1993)
C26	Ma, <i>et al.</i> , "Interaction between cyclin-dependent kinases and human papillomavirus replication-initiation protein E1 is required for efficient viral replication," <i>Proc. Natl. Acad. Sci. (USA)</i> 96:382-7 (1999)
C27	Massimi, <i>et al.</i> , "HPV-16 E7 and adenovirus E1a complex formation with TATA box binding protein is enhanced by casein kinase II phosphorylation," <i>Oncogene</i> 12:2325-30 (1996)
C28	McIntyre, <i>et al.</i> , "Human Papillomavirus E7 Oncoproteins Bind a Single Form of Cyclin E in a Complex with cdk2 and p107," <i>Virology</i> 215:73-82 (1996)
C29	Morgan, "CYCLIN-DEPENDENT KINASES: Engines, Clocks, and Microprocessors," <i>Ann. Rev. Cell Dev. Biol.</i> 13:261-291 (1997)
C30	Mulligan, <i>et al.</i> , "The retinoblastoma gene family: cousins with overlapping interests," <i>Trends Genet</i> 14:223-9 (1988)
C31	Myers, "Will combinatorial chemistry deliver real medicines?" <i>Curr. Opin. Biotechnol.</i> 8:701-707 (1997)
C32	Pei, <i>et al.</i> , "HPV-16 E7 protein bypasses keratinocyte growth inhibition by serum and calcium," <i>Carcinogenesis</i> 19:1481-6 (1998)
C33	Phelps, <i>et al.</i> , "Structure-Function Analysis of the Human Papillomavirus Type 16 E7 Oncoprotein," <i>J. of Virol.</i> 66:2418-2427 (1992)
C34	Pietenpol, <i>et al.</i> , "TGF- α 1 Inhibition of c-myc Transcription and Growth in Keratinocytes Is Abrogated by Viral Transforming Proteins with pRB Binding Domains," <i>Cell</i> 61:777-85 (1990)
C35	Pines, <i>et al.</i> , "Human cyclin A is adenovirus E1A-associated protein p60 and behaves differently from cyclin B," <i>Nature</i> 346:760-763 (1990)

EXAMINER

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	C36	Polyak, <i>et al.</i> , "Cloning of p27 ^{Kip1} , a Cyclin-Dependent Kinase Inhibitor and a Potential Mediator of Extracellular Antimitogenic Signals," <i>Cell</i> 78:59-66 (1994)
	C37	Remington's Pharmaceutical Sciences, 18 th Ed. (1990, Mack Publishing Co., Easton, PA 18042) pages 1435-1712
	C38	Ruesch, <i>et al.</i> , "Human Papillomavirus Oncoproteins Alter Differentiation-Dependent Cell Cycle Exit on suspension in Semisolid Medium," <i>Virol.</i> 250:19-29 (1998)
	C39	Scheffner, <i>et al.</i> , "The E6 Oncoprotein Encoded by Human Papillomavirus Types 16 and 18 Promotes the Degradation of p53," <i>Cell</i> 63:1129-36 (1990)
	C40	Seedorf, <i>et al.</i> , "Human Papillomavirus Type 16 DNA Sequences," <i>Virol.</i> 145:181-185 (1985)
	C41	Sverdrup, <i>et al.</i> , "Replication of Human Papillomavirus (HPV) DNAs Supported by the HPV Type 18 E1 and E2 Proteins," <i>J. Virol.</i> 68:505-509 (1994)
	C42	Tommasino, <i>et al.</i> , "HPV16 E7 protein associates with the protein kinase p33 ^{CDK2} and cyclin A," <i>Oncogene</i> 8:195-202 (1993)
	C43	Toyoshima, <i>et al.</i> , "p27, a Novel Inhibitor of G1 Cyclin-Cdk Protein Kinase Activity, Is Related to p21," <i>Cell</i> 78:67-74 (1994)
	C44	Wu, <i>et al.</i> , "The Human Papillomavirus E7 Oncoprotein and the Cellular Transcription Factor E2F Bind to Separate Sites on the Retinoblastoma Tumor Suppressor Protein," <i>J. Virol.</i> 67:2402-7 (1993)
	C45	Zerfass, <i>et al.</i> , "Inactivation of the cdk inhibitor p27 ^{KIP1} by the human papillomavirus type 16 E7 oncoprotein," <i>Oncogene</i> 13:2323-30 (1996)
	C46	zur Hausen, "Papillomavirus infections — a major cause of human cancers," <i>Biochim. Biophys. Acta</i> 1288:F55-78 (1996)
	C47	Desai, <i>et al.</i> , "Activation of Human Cyclin-Dependent Kinases In Vitro," <i>Mol. Biol. Cell.</i> 3:571-582 (1992)
	C47	Desai, <i>et al.</i> , "Activation of Human Cyclin-Dependent Kinases In Vitro," <i>Mol. Biol. Cell.</i> 3:571-582 (1992)
	C47	Desai, <i>et al.</i> , "Activation of Human Cyclin-Dependent Kinases In Vitro," <i>Mol. Biol. Cell.</i> 3:571-582 (1992)
	C48	Roberts, "Evolving Ideas about Cyclins," <i>Cell</i> 98:129-132 (1999)
	C49	Ben-Bassat, <i>et al.</i> , "Inhibitors of Epidermal Growth Factor Receptor Kinase and of Cyclin-dependent Kinase 2 Activation Induce Growth Arrest, Differentiation, and <i>Cancer Research</i> 57(17):3741-3750 (1997)
	C50	Colas, <i>et al.</i> , "Genetic selection of peptide aptamers that recognize and inhibit cyclin-dependent kinase 2," <i>Nature</i> 380:548-550 (1996)

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	C51	Funk, <i>et al.</i> , "Inhibitor of CDK activity and PCNA-dependent DNA replication by p21 is blocked by interaction with the HPV-16 E7 oncoprotein," <i>Genes & Devel.</i> 11:2090-2100 (1997)
	C52	International Search Report from PCT/US00/23487.

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